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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,559	09/24/2004	Robert C. Redburn	FIS920040095	5558
32074 7590 07/13/2007 INTERNATIONAL BUSINESS MACHINES CORPORATION DEPT. 18G BLDG. 300-482 2070 ROUTE 52 HOPEWELL JUNCTION, NY 12533			EXAMINER TO, BAOQUOC N	
			ART UNIT 2162	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/711,559		REDBURN, ROBERT C.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Baoquoc N. To		2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/24/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/07/2007 has been entered.

Claims 1, 5, 7 9, 15, 19, 24-30 are amended in the amendment filed on 06/07/2007. Claims 1-40 are pending in this application.

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawing is informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 9, 15, 24, 31 and 38-39 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues "claims 24-40 have been amended to define the computer readable storage medium and computer program product...Applicant respectfully requests that the rejection of these claims be drawn and allowance of these claims is earnestly solicited."

The examiner respectfully disagrees with the above argument. Due to the lack of disclosure regarding "computer-readable medium" and "computer usable medium" and not limiting to any specific definition; therefore, claims 24, 31 and 39 are non-statutory because claims 24, 31 and 39 might intend to cover transmission media, waves and energy.

***Specification***

4. The disclosure is objected to because of the following informalities: Applicant specification "a computer usable medium" which is lacked of antecedent and basic. Appropriate correction is required. Both "a computer-readable medium" and "a computer usable medium" are not defined in the specification. Therefore, the computer usable medium and the computer-readable medium might intended to cover any transmission media, energy and waves.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 24-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Due to the lack of disclosure regarding "computer-readable medium" and "computer usable medium" and not limiting to any specific definition; therefore, claims 24, 31 and 39 are non-statutory because claims 24, 31 and 39 might intend to cover transmission signal, waves and energy. Further, claim 38 recites "a structure query language (SQL) for querying a relational database to return specified data therefrom upon execution of a text query" which is nonfunctional descriptive material. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994). Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were

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unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.")

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-14 and 24-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hebert et al. (Oracle Spatial, User's Guide and Reference, 8.1.6. December 1999).

Regarding on claim 1 Hebert teaches a method for obtaining information from a relational database, comprising the steps of:

formulating a text query to retrieve data form the database, where a first portion of the text query specifies the data to be retrieved (mkt\_id NUMBER PRIMARY KEY) (col. 4, line 18) and a second portion of text the query specifies a format for graphing the data (insert into cola\_markets...) (page 5);

Transmitting the query to the relational database (the query to the database for retrieving data information) (example 2-1 represent the query being sent to the database) (page 5);

Executing the text query (example 2-1 represent the query is executed draw the graph) (page 4);

Returning data from the database in accordance with the text query (the retrieved data such the sale of 2003 of cola being draw such as rectangular of colar\_a) (example 2-1, page 2);

Presenting the data in accordance with said format (fig. 2-1 illustrated the graphing of the circle cola\_d....) (page 3).

Regarding to claims 2, 10, 25 and 32, Hebert a method according to claim 1, wherein the first portion of the query and the second portion of the query are for language (SQL) (page 4).

Regarding on claims 3, 11, 26 and 33, Hebert teaches a method of claim 1, wherein the data is returned as a binary image and presented as a graph (graph such as circle, rectangular shape) (example 2-1, page 4).

Regarding on claims 4, 12, 27 and 34, Hebert teaches a method of claim 1, wherein an image representation of data in ASCII format is returned from the database and presented as a graph (all of the retrieved data are in ASCII format and presented in the graph) (page 5, example 2-1).

Regarding on claims 5, 13, 28 and 35, Hebert teaches a method of claim 1, wherein said step of causing the data to be returned comprising interpreting the query in accordance with a structure query language (SQL) having keywords and syntax for specifying format (geometry) (page 3, lines 12).

Regarding on claims 6, 14 , 29 and 36, Hebert teaches a method of claim 5, wherein the graphical image is one of a line graph, a horizontal bar chart, a vertical bar chart, a pie chart, a scatter plot, a contour plot, and a wafer map, in accordance with a



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keyword in the second portion of the query (rectangular and circle) (example 2-1) (page 4).

Regarding on claims 7, 30 and 37, Hebert teaches a method according to claim 1, wherein said step of causing the data to be returned further comprises:

Interpreting the first portion of the query to cause the data to be retrieved (the retrieve data such as sale of 2003 for cola\_a, in example 2-1);

Creating a dataset for the data (the data set for the shape of rectangle) (example 2-1);

Incorporating the data into the dataset (the data set are the coordinate of the rectangle) (example 2-1); and

Constructing a graphical image using the data, in accordance with said format (col. 13, lines 10-56).

Regarding on claim 8, Hebert teaches the method of claim 7, wherein said interpreting step further comprises parsing the query so that the first portion of the query and the second portion of the query are interpreted separately (first part to create the table include mkt-id number primary key, name varchar32 and the second part to draw the mdsys.sdo\_geometry) (pages 2 lines 16-18 and page 3, lines 8-15).

As to claim 9, Herbert a method for querying a relational database, comprising the steps of:

Specifying the data to be returned form the relational database in a first portion of a text query (mkt\_id NUMBER PRIMARY KEY) (page 4, lines 18);



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Specifying a format for graphing the data in a second portion of the text query (MDSYS.SDO\_GEOMETRY) (page 5, line 11); and

Executing the text query, thereby returning the data as a graphical image in accordance with said format (example 2-1 discloses the graph of cola\_markets) (page 4).

Claims 24 is rejected by the same reason as to claim 1, and Hebert further teaches computer program product (computer software) (page 2, lines 3-4).

Claims 31 is rejected by the same reason as to claim 1, and Hebert further teaches computer program product (computer software) (page 2, lines 3-4).

As to claim 38, Hebert discloses in a structure query language (SQL) for querying a relational database to return specified data therefrom upon execution of a text query, the improvement comprising:

Keyword for specifying a format for graphing the returned data (MDSYS.SDO\_GEOMETRY) (page 5, line 10); and

Syntax for recognizing said keyword, thereby causing the data to be presented as a graph according to said format (MD.SDO\_ELEM\_INFO\_ARRAY (1,1003,3) (page 5, lines 13).

Claim 39 is rejected under the same reason as to claim 15, further Hebert also closes computer program product (computer software) (page 2, lines 3-4).

As to claim 40, Hebert discloses in a computer program product according to claim 39, the improvement further comprising first computer usable program code including code for recognizing a delimiter keyword separating SQL statements in a first portion of the text query specifying the data from SQL statements in a second portion of the text query specifying said format (pages 5, lines 8-18).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebert et al. (Oracle Spatial, User's Guide and Reference, 8.1.6. December 1999) in view of Barnes (US. Patent No. 6,993,533 B1).

As to claim 15, Herbert discloses a method using SQL language to retrieve and graph the data into different shapes such as rectangle and circle in page 4 and 5 and outputting into a display in example 2-1. Although, Herbert discloses a system for retrieving and presenting data from a relational database, comprising: a relational database; an input device for entering a database text query; a device for interpreting the text query, where said device is affective to format the data for presentation in a graphical form; and output device for presenting the data as a graphical image. However, these devices are at least the minimum requirements for a computer system to perform the method as disclosed in Herbert. Further more, Barnes also discloses a system (system 100) (fig. 1) for retrieving and presenting data from a relational database (database 230) (col. 9, line 4), comprising: a relational database (database 230) (col. 9, line 4); an input device for entering a database text query (keyboard 126) (col. 9, line 8) ; a device for interpreting the text query, where said device is affective to format the data for presentation in a graphical form (DBMS 220) (col. 9, lines 32-34); and output device for presenting the data as a graphical image (display 122 displaying the two graphic elements 3-D bar chart 710 and a table 720) (col. 14, lines 10-14).

As to claim 16, Hebert discloses a system of claim 15, wherein the text query is formulated in a structure query language (SQL) (query) (page 4 and 5).

As to claim 17, Hebert discloses a system according to claim 15, wherein the text query includes a first portion specifying the data to be retrieved and a second portion specifying said graphical form excepting for said device for interpreting the text query has an interpreter for interpreting both the first portion and the second portion of the text query. Hebert discloses said device for interpreting the text query has an interpreter for interpreting both the first portion and the second portion of the text query (corresponding to the second component of the software system 200 is the DBMS 220 which is capable of building, accessing, and manipulating a database 230 using a standard database query language...) (col. 9, lines 31-37). This suggests the RDBMS is the interpreter to interpret the first and second portion of the text query. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify teaching of Hebert to include the RDBMS as an interpreter to interpret the first and second portions SQL to retrieve and graph the data as taught by Heber in order to allow the data to be displayed in the visualization.

As to claim 18, Hebert discloses a system according to claim 15, wherein the text query includes a first portion specifying the data to be retrieved and a second portion specifying said graphical form excepting for said device for interpreting the text query has a first interpreter for interpreting the first portion and a second interpreter for interpreting the second portion of the text query. However, Barnes discloses said device for interpreting the text query has a first interpreter for interpreting the first portion and a second interpreter for interpreting the second portion of the text query

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(corresponding to the second component of the software system 200 is the DBMS 220 which is capable of building, accessing, and manipulating a database 230 using a standard database query language...) (col. 9, lines 31-37). This suggests the RDBMS is the interpreter to interpret the first and second portion of the text query. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify teaching of Hebert to include the RDBMS as an interpreter to interpret the first and second portions SQL to retrieve and graph the data as taught by Heber in order to allow the data to be displayed in the visualization.

Regarding on claim 19, Hebert teaches a method according to claim 15, wherein said step of causing the data to be returned further comprises:

Interpreting the first portion of the query to cause the data to be retrieved (the retrieve data such as sale of 2003 for cola\_a, in example 2-1);

Creating a dataset for the data (the data set for the shape of rectangle) (example 2-1);

Incorporating the data into the dataset (the data set are the coordinate of the rectangle) (example 2-1); and

Constructing a graphical image using the data, in accordance with said format (col. 13, lines 10-56).

Regarding on claim 20, Hebert teaches a method of claim 15, wherein the data is returned as a binary image (graph such as circle, rectangular shape) (example 2-1, page 4).

Regarding on claim 21, Hebert teaches a method of claim 15, wherein an image representation of data in ASCII format is returned from the database and presented as a graph (all of the retrieved data are in ASCII format and presented in the graph) (page 5, example 2-1).

Regarding on claim 22, Hebert teaches a method of claim 16, wherein the SQL includes keywords and syntax for specifying said graphical form (geometry) (page 5, line 10)

Regarding on claim 23, Hebert teaches a method of claim 15, wherein the graphical image is one of a line graph, a horizontal bar chart, a vertical bar chart, a pie chart, a scatter plot, a contour plot, and a wafer map, in accordance with a keyword in the second portion of the query (rectangular and circle) (example 2-1) (page 4).

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041, or unofficial fax number for the purpose of discussion (571) 273-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231.

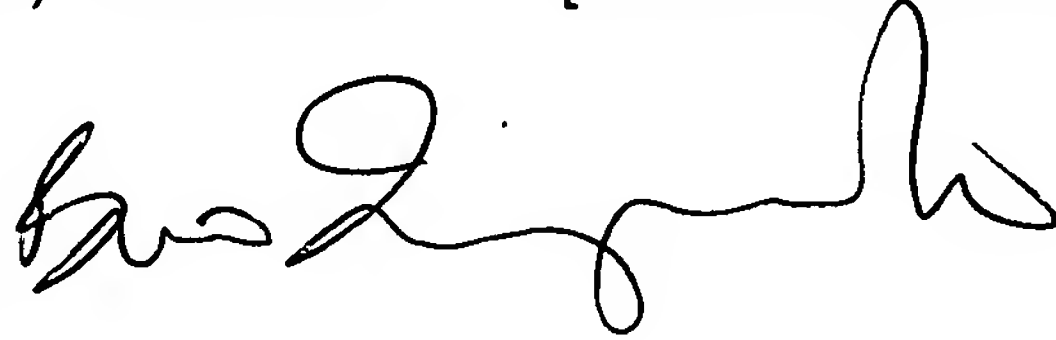
The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) -273-8300

[Official Communication]

BQ To

July 8<sup>th</sup>, 2007

A handwritten signature in black ink, appearing to be "Barry" followed by a stylized surname, written over the date.